

What is claimed is:

- 1 1. Apparatus for automatically dispensing a fluid comprising:
 - 2 a) a container adapted to carry a supply of fluid;
 - 3 b) a valve connected to said container, wherein actuation of said valve
4 dispenses the fluid;
 - 5 c) an apparatus position indicator proximally associated with said
6 container;
 - 7 d) an object sensor positioned near said valve, wherein said object sensor
8 monitors an area below where said valve dispenses when open and
9 upon detection of an object opens said valve; and
 - 10 e) wherein initial positioning of the apparatus triggers said apparatus
11 position indicator to generate an appropriate signal until said object
12 sensor is properly positioned.
- 1 2. The apparatus according to Claim 1, wherein said apparatus position
2 indicator includes at least one illumination device that illuminates when said
3 object sensor is properly positioned.
- 1 3. The apparatus according to Claim 1, wherein said apparatus position
2 indicator includes at least one illumination device that illuminates until said
3 object sensor is properly positioned.
- 1 4. A method for installing an automated fluid dispenser, comprising:
 - 2 a) providing a fluid dispenser for carrying a container, a valve connected
3 to said container wherein actuation of said valve dispenses a fluid
4 carried by said container when installed, an apparatus position
5 indicator carried by said fluid dispenser, and an object sensor
6 positioned near said valve;
 - 7 b) connecting a power source to at least said apparatus position indicator
8 and said object sensor;

- 1 c) positioning said fluid dispenser in at least one prospective mounting
2 location;
3 d) emitting from said object sensor a test signal to ensure proper
4 positioning of said fluid dispenser; and
5 e) repeating steps c) and d) until said apparatus position indicator
6 provides a positive indication of said fluid dispenser's placement.

- 1 5. The method according to Claim 4, further comprising:
2 marking a position of said fluid dispenser's positive placement; and
3 permanently installing said fluid dispenser at said position.

- 1 6. The method according to Claim 5, further comprising:
2 installing said container in said fluid dispenser.

- 1 7. Apparatus for dispensing a measured quantity of fluid, comprising:
2 a) an object sensor;
3 b) a container carrying a supply of fluid;
4 c) a dispense mechanism coupled to said container to control an amount
5 of fluid to be dispensed;
6 d) a pump actuator mechanism coupled to said object sensor, wherein
7 detection of an object by said object sensor cycles said pump actuator
8 mechanism to engage said dispense mechanism which dispenses a
9 measured quantity of fluid; and
10 e) a hidden switch carried by said container, wherein actuation of said
11 hidden switch enables a processor to enter an operational feature mode.
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- 1 8. The apparatus accordingly to Claim 7, further comprising:
2 at least one illuminating indicia connected to said processor wherein
3 entry into said operational feature mode is indicated by said at least one
4 illuminating indicia.

1 9. The apparatus according to Claim 8, further comprising:
2 at least two lights, wherein said lights are sequentially illuminated to
3 indicate where an object should be placed for receipt of the fluid; and
4 wherein entry into said operational feature mode allows enablement or
5 disablement of said at least two lights.

1 10. The apparatus according to Claim 8 wherein entry into said operational
2 feature mode allows selection of a number of cycles of said pump actuator
3 mechanism to control an amount of dispensed fluid upon detection of an
4 object.

1 11. The apparatus according to Claim 8 wherein entry into said operational
2 feature mode allows selection of a size of said dispense mechanism.

1 12. The apparatus according to Claim 8, further comprising:
2 a low level indicator connected to said processor,
3 wherein entry into said operational feature mode allows selection of a
4 number of cycles of said pump actuator mechanism to control an amount of
5 dispensed fluid upon detection of an object,
6 wherein entry into said operational feature allows selection of a size of
7 said dispense mechanism, and
8 wherein said processor calculates when the fluid in a given size of
9 container will be depleted to a predetermined level based upon said number
10 of cycles and size of said dispense mechanism.

1 13. The apparatus according to Claim 8, further comprising:
2 a timer connected to said processor, said timer initiated upon actuation
3 of said hidden button to allow for servicing of the apparatus.

1 14. The apparatus according to Claim 13, wherein said object sensor is disabled
2 while said timer is running.

1 15. The apparatus according to Claim 14, wherein said object sensor is re-
2 enabled upon either expiration of said timer or re-actuation of said hidden
3 switch.

1 16. Apparatus for dispensing a measured quantity of fluid, comprising:
2 a) a container carrying a supply of fluid;
3 b) a dispense mechanism coupled to said container to control an amount
4 of fluid to be dispensed;
5 c) a pump actuator mechanism coupled to said object sensor, wherein
6 detection of an object by said object sensor cycles said pump actuator
7 mechanism to engage said dispense mechanism which dispenses a
8 measured quantity of fluid; and
9 d) a timer having a predetermined period of time, said timer associated
10 with said dispense mechanism, said timer actuated upon dispensing of
11 said dispense mechanism, said dispense mechanism disabled if a
12 predetermined number of dispense events occur within said
13 predetermined period of time.

1 17. The apparatus according to claim 16, wherein said dispense mechanism is
2 re-enabled upon completion of a second period of time.

1 18. The apparatus according to claim 17, wherein said predetermined period of
2 time is about 15 seconds and said predetermined number of dispense events
3 is about 5.

1 19. The apparatus according to claim 17, wherein said second period of time is
2 about 45 seconds.

- 1 20. Apparatus for dispensing a measured quantity of fluid, comprising:
2 a) an object sensor which generates an object signal upon detection of an
3 object;
4 b) a container carrying a supply of fluid;
5 c) a dispense mechanism coupled to said container to control an amount
6 of fluid to be dispensed;
7 d) a pump actuator mechanism coupled to said object sensor, wherein
8 detection of an object by said object sensor cycles said pump actuator
9 mechanism to engage said dispense mechanism which dispenses a
10 measured quantity of fluid and wherein said pump actuator mechanism
11 converts rotational motion to linear motion to cycle said dispense
12 mechanism; and
13 e) a control circuit having a processor to receive said object signal,
14 wherein said processor generates a cycle signal received by said pump
15 actuator mechanism to actuate said dispense mechanism.

- 1 21. The apparatus according to Claim 20, further comprising:
2 a motor carried by said pump actuator mechanism, wherein a motor
3 drive input signal is generated by said processor;
4 a motor sensor coupled to said pump actuator, said motor sensor
5 detecting a position of said motor and generating a brake input signal when
6 said motor position is detected,
7 wherein generation of said brake input signal connects said motor
8 drive input signal to ground to effectively brake said motor.

- 1 22. The apparatus according to Claim 20, further comprising:
2 a motor carried by said pump actuator mechanism, wherein a motor
3 drive signal is generated by said processor to actuate said motor and said
4 pump actuator mechanism;
5 an overload circuit carried by said control circuit, wherein if said
6 overload circuit detects a voltage value in excess of a predetermined

1 threshold, an overload signal is generated and received by said processor
2 which in turn stops generation of said motor drive signal.

1 23. The apparatus according to Claim 20, wherein said control circuit
2 comprises:

3 a sensor circuit for carrying said object sensor; and

4 a systems circuit for carrying said processor, wherein said sensor
5 circuit and said systems circuit are maintained on their own respective circuit
6 boards to minimize interference therebetween.

1 24. The apparatus according to said Claim 23, wherein each said respective
2 circuit board functions as a shielded backplane.